

National Research Infrastructure - Funder or Partner?

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Abstract

Since 2009 the Australian National Data Services (ANDS) has evolved and matured as a national infrastructure project. This has involved a change in its engagement model; primarily moving from a compliance and milestone driven model, towards a partnering organisation. In 2013 ANDS streamlined its contract management and reporting process and initiated the Institutional Engagement program to assist partnering organisations achieve their research data ambitions. These, amongst other initiatives, helped ANDS move towards operating as a collaborator and partner, rather than solely as a funder.

Between 2013 and 2017 ANDS changed its engagement model during four of its funding programs by offering funding and expertise into projects. However, the uptake of expertise was not as successful in the earlier programs as anticipated. As a result, changes in how ANDS engaged, including working more closely with project partners at the project initiation stage, were introduced. These changes improved ANDS' ability to become embedded as a trusted and invested partner in the project team. Feedback provided by project partners during surveys and interviews suggests the shift from funder to partner is slowly evolving and moving in the right direction. To continue this process, ANDS, RDS and Nectar have adopted a Partnership Strategy as part of delivering its aligned business plan in 2018.

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Introduction

In 2008 the Australian National Data Services (ANDS) was established by the Australian Department of Education Science and Training (DEST) and funded under the Australian National Collaborative Research Infrastructure Strategy (NCRIS). The aim of the project was ‘to ensure that Australian research data is well managed, made available for access, and discoverable so that researchers can find and access any relevant data in the Australian “research data commons”’ (Treloar, 2009). A budget of \$24.5 million (AUS) was allocated to the establishment of the ANDS project for a period of three years (2008 –2011). This was followed by \$48 million (AUS) in 2009 under the Super Science Initiative, followed by smaller amounts of subsequent funding until 2018.

In 2008 ANDS’ aim was to enable researchers to work in a new world of data-intensive research and identified the following needs:

- Policies that support a new way of working;
- A technical data fabric that enabled storing and moving data;
- A repository to store data;
- A referencing mechanism that enabled input data and modelling outputs, visualisations, software code, documents, to be cross referenced;
- The ability to search across all the collections that had been registered; and
- Training and training materials that enabled infrastructure to be well used.

It was envisaged that these activities would proceed in an informed way and with an awareness of the need for multiple approaches across disciplines, which would have varying maturities in data management practices. This was to be delivered under four programs:

- **Developing Frameworks:** influence relevant national policies, undertake the development of policies, and build a common understanding of data management issues and solutions, across government departments, research funding agencies, and research-intensive organisations.
- **Providing Utilities:** deliver fundamental utility services for a cohesive network of data collections, and provide discovery, access, and other value-add services across the resulting data commons. Ensuring services develop and evolve to meet changing data reuse requirements, and repositories aggregated into federations, underpinning the development of a research data commons.
- **Seeding the Commons:** increase the amount of content available in the ‘Australian Research Data Commons’ and in a targeted way improve the state of data capture and management across the research sector, and
- **Building Capabilities:** identify and engage with the key community of content holders, from the research and government sectors, responsible for retention and access services over data. Improve the level of capability for research data creation, management, and access to data and associated technologies across

Australia by partnering with willing institutions keen to implement best practices in data management planning.

Although the ANDS programs and the manner of stakeholder engagement has changed and evolved since 2008, the original intent of ANDS in terms of its core aim and activities has been consistent and essentially remained the same. For example, the aim in 2016 was to make Australia's research data assets more valuable for researchers, research institutions, and the nation through:

- **Trusted partnerships:** working with partners and communities on research data projects and collaborations;
- **Reliable services:** delivering national services to support data discovery, connection, publishing, sharing, use and reuse; and
- **Enhanced capability:** building the data skills and capacity of Australia's research system.

In 2013, ANDS established the Institutional Engagement program to assist organisations achieve their research data ambitions and help maintain institutional infrastructure, by providing targeted assistance. The aim of the program was to build on the work started under the Seeding the Commons, Data Capture, Metadata Stores and Application programs, which funded the establishment of infrastructure at Australian institutions for depositing data and metadata.

Changing Engagement Models

The new approach to its programs changed how ANDS engaged with institutions more broadly and through its funded projects. The new engagement model involved moving from a compliance and milestone-driven project management approach to one that partnered and assisted the project partner. Although the compliance driven approach was appropriate at the time; given the rapid increase in funding received in 2009 and the number of projects distributing funds across numerous organisations, there was a recognition that bringing together the research office, Library and Information Technology Services may result in greater benefits to the institution, and not just the research group involved in the project. To do this, ANDS needed to actively engage with the wider institutional sector and bring various stakeholders together when initiating projects. It was also decided that a more lightweight approach to contract management and reporting would be beneficial.

In 2013, the institutional engagement team, colloquially known as the 'Outreach Officers', were given responsibility as the key contact with each of the 39 research intensive organisations served by ANDS, which included the universities and the Commonwealth Scientific and Industrial Research Organisation (CSIRO). Their key responsibility was to ensure ongoing engagement and to facilitate and bring together relevant stakeholders at the institution, to help achieve the common goal of improving research data management practices across the sector. This new approach was undertaken for two funded programs; Major Open Data Collections (MODC) and Open Data Collections (ODC), which provided funding to 33 partnering institutions from 2013-2015 to enable research data collections to be openly available. One of the aims of both of these programs was to increase the number of openly available and

downloadable datasets discoverable via the Research Data Australia¹ portal to further build up the Australian Research Data Commons.

The team were each assigned a number of projects and encouraged to work with the project partner in order to become an embedded member of the project team. This required building a trusted relationship with the project stakeholders, good communication skills, and an understanding of the politics and working methods at the institution. Despite access to ANDS expertise being flagged at the project inception phase and promoted throughout the project, the uptake of the service was lower than anticipated. An unexpected outcome, given the expectation that access to expertise from data professionals, many whom had worked in the sector for years, seemed like an attractive proposition.

In 2015 the annual ANDS Partner and Researcher Satisfaction Survey was undertaken at the completion of the MODC and ODC programs and provided some insight. Respondents flagged that having a local contact was very important for informal discussion and progression of solutions. Others felt at times that the level of project administration was not lightweight and felt compelled to use ANDS staff when unnecessary. The lack of a local ANDS contact to engage with was later flagged, during a post-project interview in 2017 by a partner involved in the HVC and CEP programs, who indicated that it would be definitely easier if ANDS resource were provided on-site instead of remotely. An issue given the size of Australia and location of organisations in relation to the location of ANDS staff.

Although unsubstantiated, the lack of uptake may also have been attributed to needing to establish new relationships and build trust with project partners. Many of the project teams ANDS had engaged with in the past had since disbanded or moved on due to funding shortfalls at the institutions and/or delays due to NCRIS funding announcements at that time. In addition, an internal change in how ANDS related to its stakeholders was also needed, given how engagement, relationship, and project management had previously been undertaken. There may have been a lack of transparency regarding the expertise available and how ANDS promoted its services to partners. Feedback provided during a post HVC and CEP interviews indicated that teams weren't sure what services were available, and how they could access them.

Despite these hurdles, the change in approach was viewed positively by partners, as indicated by the 2015 ANDS Partner and Researcher Satisfaction Survey, which reported satisfaction was very high regarding ANDS Support (93%), ANDS Services (87%), and the lightweight project administration approach taken (80%). One respondent commented that ANDS being a partner contributing to the project, rather than funder enforcing, worked well.

Although progress had been made, an internal review after the MODC and CEP programs raised some concerns, including that the approach taken may have become too lightweight and was not shifting the view that ANDS was merely a funder. This was based on the level of engagement with the 'Outreach Officers', as a number had been excluded from the project teams and were seeing a lower than expected level of uptake of expertise and direct engagement. This perception was later confirmed during the post HVC and CEP interviews in 2017 when a respondent involved in the MODC funded program provided the following feedback: 'the approach was a new and different experience; much more hands on from funder' and 'Strong buy-in from ANDS; I realised that ANDS weren't just trying to check up'.

As part of High Value Collections (HVC) and Collection Enhancement Partnerships (CEP) programs, which provided funding from 2015-2017 to 39 partnering institutions to enable strategically important collections to be formed, the engagement model was

reviewed, and a decision made to involve ANDS in the project inception and planning process, and throughout the project. The changes initiated involved introducing ANDS involvement at the initial high-level discussions, the project initiation and scoping discussions, and reiterating it throughout the process.

As a result, ANDS participated in the project scoping and contracting phase, and relevant staff had the opportunity to meet with all project stakeholders early on, participate in the project planning meetings and engage in the process of writing the project plan. This provided an opportunity to ask questions or suggest areas to explore during the project, thereby enabling the project stakeholders to gain an insight into the expertise and knowledge available at ANDS. The ANDS project lead assigned to the team was responsible for introducing various concepts and expertise throughout the project and facilitating the discussions required. At the end of the two programs the level of ANDS expertise utilised was greater than the previous programs. In addition to specific expertise, the other valued contributions ANDS provided included the facilitation and brokering of relationships with other partners, assisting with project management, and acting as a sounding board to brainstorm concepts and ideas.

At the completion of the HVC and CEP programs project participants were invited to provide feedback via an interview. A series of questions were asked including what they thought of the project scoping and planning process and timeframes? (Q2.), the level of ANDS input and expertise? (Q3.), if ANDS expertise wasn't utilised, why? (Q4.), and other general feedback (Q.8, Q9.).

Eighty-seven percent of project partners participated in the interviews and provided feedback. In response to the question regarding the process and timeframes (Q2.) 74% of those interviewed provided positive responses, indicated by the use of words such as 'positive', 'worked well', 'beneficial', 'helpful', 'good balance', 'really good', 'agile', 'process was great', 'straight forward', 'seamless', 'clear', 'smooth process', and 'flexible'. Timeframes were indicated as being problematic for some partners.

In response to the question regarding the level of ANDS input and expertise (Q3.), 82% of respondents accessed some form of expertise during the project and again positive words were reflected in the responses provided regarding this service. Terms primarily used were 'good', 'very good', 'helpful', 'great', and 'useful'. Reasons provided by six of the respondents that didn't access expertise or only utilised limited amounts (Q4.) included 'Weren't sure what services were available, and how much we can access', 'More comfortable talking to a local person', 'Focus was very much on the technical aspects of the project and the team had the ability to manage data oriented activity', 'Used some services and the other issues were not really things ANDS could help with', 'Would be useful to get a better ideas of what hours and when we could expect ANDS effort', and 'Time Constraints'.

However, other general feedback provided (Q.8, Q9.) during the interview process suggests that changes made to the engagement model between 2013 and 2017 contributed to ANDS being perceived as trusted and a valued project partner;

- Planning for this project seemed easier than for previous AND projects – partly this was because of the excellent engagement from the researchers, but also a more agile process from ANDS. There was flexibility in how they could contribute – good level of trust.
- Joint planning was helpful. ANDS structure is complex, with expertise spread across people and locations, so joint planning process was helpful for navigating that.

- Positive outcome from project for the University and for the Library.
- Having ANDS there throughout the journey works well to keep researchers involved; ANDS involvement adds weight in getting buy-in. Really helpful having outreach officer there to offer ideas from the start.
- Not micro-managed. Flexibility for project worked well. Improvement since Seeding the Commons (early projects administration required more time), which took time from engagement.
- Been an amazing journey. Couldn't have done it without ANDS project.

The method of engagement adopted by the ANDS team was underpinned by principles forming any trusted and enduring partnership, including:

- Shared core values and goals;
- Ability to respect others skill sets and what they bring to the team;
- Shared leadership values and alignment;
- Freedom to ask questions, and not make assumptions;
- Good and respectful communication, including regular scheduled meetings.

It's acknowledged by the author that the perceptions outlined are limited to stakeholders directly engaged in the four funded programs and may not be shared by others in the sector or at the institutions involved. Yet as one respondent commented, the ability to have such a good working relationship with an external partner is very important and such transparency is often rare.

The Future

In 2016, 27 projects and facilities, including ANDS, funded under the NCRIS program were reviewed by an Expert Working Group led by Dr Alan Finkel AO, the Chief Scientist for Australia. The consultation process involved a number of open forums and a call for submissions in response to the National Research Infrastructure Capability Issues Paper (Australian Government, 2016). In 2017, the 2016 National Research Infrastructure Roadmap was released (Australian Government, 2017), outlining the national research infrastructure required over the next ten years. It's anticipated that in July 2018 the existing ANDS project will cease in its current form and a new entity will commence incorporating two other NCRIS projects; Research Data services (RDS) and the National eResearch Collaboration Tools and Resources (Nectar).

In 2016, ANDS, RDS, and Nectar began collaborating on projects, adopted an aligned business plan, and identified in 2017 the need for a Partnership Strategy. The objectives of the Partnership Strategy will enable ANDS, Nectar and RDS to:

- Establish and maintain mutually beneficial, strategic partnerships;
- Facilitate effective engagement with key stakeholders of all types throughout the sector;

- Ensure ANDS, Nectar, and RDS vision and programs are informed by, and responsive to, stakeholder interests;
- Partner in strategic ways that demonstrate the value of collaboration, to further encourage this approach within the sector.

The strategic vision of ANDS, Nectar and RDS will be to facilitate the integration of the Partnerships Strategy into structural frameworks and organisational culture, focusing in 2017-18 on strengthening strategic engagements and building partnerships to enable common goals to be met in the immediate and long-term.

Conclusion

Three of the key success measures of ANDS has been its flexibility to respond, to foster data focused engagements with diverse stakeholders across the sector, and to provide funding along with expertise to enable the data ambitions of organisation to become realised. Through its funded projects ANDS has demonstrated that a national infrastructure provider can be both a funder and a project partner, interested in achieving the immediate and broader goals. As research infrastructure projects embed themselves within the research sector and within project teams:

‘... we are in a position to observe behaviours and group dynamics at work in the day-to-day life of the emerging partnership; we are exposed to and experience the cultural dimensions of the partner organisations as we perform our roles and tasks. Therefore, understanding a partnership in terms of its emerging organisational culture and in relation to the organisational culture of the partners helps us too – we have the opportunity to make practical and tactful interventions where required’ (Hundal, 2015).

By incorporating these observations and its engagement principles, ANDS, RDS and Nectar can provide useful insights, along with experience and knowledge gained over the last ten years, into the proposed new entity; The National Research Data Cloud (NRDC), outlined in the 2016 National Research Infrastructure Roadmap.

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